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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,614	09/24/2003	John E. Fagan	5820.642	5617

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EXAMINER

ISSING, GREGORY C

ART UNIT	PAPER NUMBER
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3662

DATE MAILED: 02/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/669,614

Applicant(s)

FAGAN ET AL.

Examiner

Gregory C. Issing

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-72 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20040420</u> . | 6) <input type="checkbox"/> Other: ____ |

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1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6, 22, 37, 38, 43-46, 53, 54 and 59-62 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6, 22, 38, and 54 are not clearly written since the language "does not require any significant power or communication infrastructure" fails to provide clear and distinct limitations to the claims.

Claims 37, 43-46, 53, and 59-62 are not clearly written in light of the dependence of such claims on improper parent claims. For purposes of this examination, it is assumed that claim 37 is dependent upon claim 36, that claims 43-46 are dependent upon claim 42, that claim 53 is dependent upon claim 52, and that claims 59-62 are dependent upon claim 58.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-72 are rejected under 35 U.S.C. 102(a) as being anticipated by FAA-E-2937A.
5. FAA-E-2937A discloses the Local Area Augmentation System which is known/shown to include: the claimed plurality of reference stations at known locations collecting GPS data from the constellation of satellites; a master station collecting the data from the plurality of reference stations, forming correction messages therefrom, and broadcasting the correction messages via an VHF broadcast to users in the area; and a plurality of users including GPS receivers for receiving GPS signals and an LAAS receiver for receiving the correction messages from the master station for

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use in determination of position. See Section 1.2 Overview of FAA-E-2937A for the overview of the known LAAS architecture. The FAA-E-2937A lists and describes various features of the monitoring of the LGF altogether as well as the monitoring of the VHF broadcast, for example, Sections 3.1.2, 3.1.3, 3.1.5, and 3.2.3. As the monitor monitors the correctness of data before and after transmission, it is inherent that the monitor would receive any transmissions in the vicinity. The FAA-E-2937A also describes the use of up to three Additional VDM Subsystems (AVS) each of which is capable of independent remote operation at a distance of up to 5 nm from the primary VDB Subsystem which is located in the primary equipment shelter (Section 3.3.1.1). The language "providing," "installing," and "distributing" are each met by the reference. Section 3.1.5. is directed towards the monitoring and generation of alerts and alarms.

6. Claims 1-72 are rejected under 35 U.S.C. 102(b) as being anticipated by Swider et al.

7. Swider et al disclose the Local Area Augmentation System which is known/shown to include: the claimed plurality of reference stations at known locations collecting GPS data from the constellation of satellites; a master station collecting the data from the plurality of reference stations, forming correction messages therefrom, and broadcasting the correction messages via an VHF broadcast to users in the area; and a plurality of users including GPS receivers for receiving GPS signals and an LAAS receiver for receiving the correction messages from the master station for use in determination of position. See Figures 3 and 4 of Swider for the overview of the known LAAS architecture. Figure 4 of Swider shows a monitor for monitoring the VHF data broadcast broadcasting the correction message. As the monitor monitors the correctness of data before and after transmission, it is inherent that it would the monitor would receive any transmissions in the vicinity.

8. Claims 1-16 and 68-72 are rejected under 35 U.S.C. 102(b) as being anticipated by Murphy (5,786,773).

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9. Murphy discloses a local area augmentation system for a precision approach aircraft including the monitoring of the VHF Broadcast of the correction messages using a VHF receiver 128 that also receives broadcasts from other nearby ground stations so as to monitor the integrity of the its own transmissions. The purpose of any monitoring system is to detect errors and provide knowledge of such errors to the users/system. As such the notifications meet the scope of the alert.

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Franke et al in view of either one of Lamb or Wulschleger et al.

12. Franke et al teach an airport surveillance system for terrestrial navigation and landing systems in which the navigational signals are received and evaluated by a ground based control facility. The monitoring stations are dispersed in the area of the airport, monitor transmissions so that faults and/or signal distortions that occur within the system itself or other influences may be detected, and the transmissions are evaluated so as to reduce the dangers of faults or falsifications due to erroneous or rogue transmissions. Franke et al is not specific to LAAS.

13. Each of Lamb and Wulschleger et al teach the conventionality of a Local Area Augmentation System in the vicinity of an airport. As such it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Franke et al by providing the services of an LAAS system to aid in navigating the aircraft in the vicinity of the airport. The combination of Franke et al and either one of Lamb or Wulschleger et al suggest the use of LAAS for precision


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navigation of aircraft in the vicinity of an airport as well as the monitoring of transmissions in said vicinity that would affect the ground based services thereof.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory C. Issing whose telephone number is 703-306-4156. The examiner can normally be reached on Monday - Thursday 6:00 AM- 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 703-306-4171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Gregory C. Issing
Primary Examiner
Art Unit 3662

gci